

JAN 06 2004

OFFICIAL
PATENTSIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Basil et al.	Attorney Docket:	0960-021
Serial No:	10/010,894	Examiner:	Not Assigned
Filed:	11/08/2001	Art Unit:	2611
TITLE: CAPACITY SCALING AND FUNCTIONAL ELEMENT REDISTRIBUTION WITHIN AN IN-BUILDING COAX CABLE INTERNET ACCESS SYSTEM			

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
 Box Amendment – No Fee
 Washington D.C. 20231

Sir:

In order to correct a typographical error and to comport the text with Figure 1, please amend the specification as follows:

Page 4, line 9, delete the numeral [64] and insert -- 62 --.

In conformity with 37 CFR 1.121(b)(1), a marked-up page 3 and a clean replacement page 3, as amended, are included for reference. This amendment corrects an obvious error and does not add any new matter.

Dated: May 3, 2002

Respectfully submitted,



Kevin E. Flynn
 Reg. No. 37,325

Daniels & Daniels, P.A.
 P.O. Drawer 12218
 Research Triangle Park, NC 27709
 Voice 919.544.5444
 Fax 919.544.5920
 email Kflynn@daniels.com
 Enclosures

F:\CL\0960-018\Prosecution\Preliminary Amendment.doc

referenced above, the server 36 is comprised of a number of components shown here as RF modem 37, protocol converter 38, and NIC unit 39. The operation of these components was described in the '378 application and does not need to be repeated here. A coax tree and branch network 50 connects the head end 42 of the tree and branch network to a set of splitter devices.

5 A partial set of splitter devices is shown in Figure 1 as splitters 52, 54, and 56. Thus, the signal at head end 42 is present at the input to client modem devices 60, 62, 64, 66, 68, and 70. Output jacks on the client modem devices allow for connection of televisions (71, 75, 80, 84, 86, and 90), devices such as personal computers (72, 81, 87, and 92), and telephones (74, 77, 78, 82, 85, and 88). Note that two telephones 77 and 78 are connected to modem device 62. Each of
10 the two telephones is connected to its own telephone port. As the cable TV signal does not need to be processed within the modem devices, this signal can be taken from an external diplexer positioned upstream of the modem device rather than as shown from an output on the modem device. Note elements 94 and 96 will be discussed below.

15 The '378 application includes an RF coax transmission system in which all information flowing downstream (from 42 to the client modem devices 60, 62, 64, 66, 68, and 70) is formatted according to DVB/MPEG-2 structure to facilitate multimedia applications.

20 In order to assist in illustrating the concepts of the present invention, the preferred formats for use in the downstream and upstream transmissions in a particular coaXmedia system are illustrated in Figure 2. The specifics of the data structure included for an example and do not represent mandatory aspects of the present invention.

The downstream transmission frame 100 is a 204-byte MPEG/DVB frame. The downstream transmission frame 100 is comprised of: a SYNC byte 104 (of value 47 hex for frame or packet start identification and B8 hex, i.e. inverted 47 hex for multi-frame identification); followed by two bytes used by MPEG2 for packet identification 108 ("PID");
25 followed by an additional byte reserved for packet type identification 112; a payload of 184 bytes; and a FEC field 120 of 16 bytes. The FEC field 120 is followed by a SYNC byte 104 from the next frame.

30 Any downstream data (whether IP, voice, video, etc.) is placed in one or more data sub-packets 130. One or more data sub-packets are carried in the MPEG frame payload 116. The specific organization of the data-sub packets is not important to this invention but the data sub-

referenced above, the server 36 is comprised of a number of components shown here as RF modem 37, protocol converter 38, and NIC unit 39. The operation of these components was described in the '378 application and does not need to be repeated here. A coax tree and branch network 50 connects the head end 42 of the tree and branch network to a set of splitter devices.

5 A partial set of splitter devices is shown in Figure 1 as splitters 52, 54, and 56. Thus, the signal at head end 42 is present at the input to client modem devices 60, 62, 64, 66, 68, and 70. Output jacks on the client modem devices allow for connection of televisions (71, 75, 80, 84, 86, and 90), devices such as personal computers (72, 81, 87, and 92), and telephones (74, 77, 78, 82, 85, and 88). Note that two telephones 77 and 78 are connected to modem device [64] 62. Each 10 of the two telephones is connected to its own telephone port. As the cable TV signal does not need to be processed within the modem devices, this signal can be taken from an external diplexer positioned upstream of the modem device rather than as shown from an output on the modem device. Note elements 94 and 96 will be discussed below.

15 The '378 application includes an RF coax transmission system in which all information flowing downstream (from 42 to the client modem devices 60, 62, 64, 66, 68, and 70) is 20 formatted according to DVB/MPEG-2 structure to facilitate multimedia applications.

20 In order to assist in illustrating the concepts of the present invention, the preferred formats for use in the downstream and upstream transmissions in a particular coaxmedia system are illustrated in Figure 2. The specifics of the data structure included for an example and do not represent mandatory aspects of the present invention.

The downstream transmission frame 100 is a 204-byte MPEG/DVB frame. The downstream transmission frame 100 is comprised of: a SYNC byte 104 (of value 47 hex for frame or packet start identification and B8 hex, i.e. inverted 47 hex for multi-frame identification); followed by two bytes used by MPEG2 for packet identification 108 ("PID"); 25 followed by an additional byte reserved for packet type identification 112.a payload of 184 bytes; and a FEC field 120 of 16 bytes. The FEC field 120 is followed by a SYNC byte 104 from the next frame.

30 Any downstream data (whether IP, voice, video, etc.) is placed in one or more data sub-packets 130. One or more data sub-packets are carried in the MPEG frame payload 116. The specific organization of the data-sub packets is not important to this invention but the data sub-